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EXAMINER	
WANG, JIN CHENG	

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2672	7

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/802,963	Applicant(s) NOLAN, PAUL ANTHONY JOHN	
	Examiner Jin-Cheng Wang	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Office Action is in response to the request for reconsideration filed on 05/11/2004. Claims 1-8 are pending in the application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Decoste et al. U.S. Pat. No. 6,317,142 (Decoste).

3. Claim 2:

Decoste teaches a method of creating effects in a graphical image, comprising choosing a media image (column 4, lines 55-67 and column 6, lines 1-9), causing edges of the media image to have less transparency (a soft brush edge having an adjustable gradient that gives the edge a soft or fuzzy appearance; figure 14, column 14, lines 63-67 and column 15, lines 1-24), adding the media image to a paint layer (column 15, lines 25-67 and column 16, lines 1-41), and

brightening ("Brighten" in figure 18) parts of the paint layer with the media image (figure 18, column 15, lines 25-67 and column 16, lines 1-41).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Long U.S. Pat. No. 5,412,767 (Long).

6. Claim 3:

Long teaches a method of creating effects in a processed graphic image, comprising providing an image channel with a graphic image having source pixels (column 4-6), providing an alpha channel having alpha channel pixels which are spatially equivalent to the source pixels (column 4-6), assigning a color value assigned to alpha channel pixels (e.g., brush profile values or stencil store 41 or the brush stamps; the source pixels and brush profile values), brightening (multiplying the profile values with stencil signals or changing the colors associated with the brush stamps and therefore brightening or darkening the color value) the color value assigned to alpha channel pixels (column 4-6), and causing edges of an image formed by the alpha channel pixels to have less transparency (e.g., a soft brush edge having an *adjustable gradient* that gives

the edge a soft or fuzzy appearance wherein a profile controls the gradient of the brush and opacity control determines the level of brush transparency; column 4-6).

Examiner Note:

- Long teaches brightening because Long teaches the tuning of the brightness by increasing or decreasing the intensity of the three color components of the individual pixels, wherein the degree of brightening or darkening is prescribed by the control parameters such as brush profile values.
- Long teaches soft brush edge having an *adjustable gradient* that meets the claim limitation of "edges to have less transparency" because a soft brush edge having an adjustable gradient gives the edge a soft or fuzzy appearance wherein a profile controls the gradient of the brush and opacity control determines the level of brush transparency.

7. Claim 4:

Long teaches a method of creating effects in a graphic image, comprising providing a source image channel having source pixels (column 4-6), providing a color level with selected colors (figure 12A and column 15, lines 24-31), providing an alpha channel having alpha channel pixels (e.g., alpha channel pixel profile data that defines which pixels, paint strokes affect the image; alpha channel pixels correspond to the brush stamp pixels that are modifiable by the profile data) which are spatially equivalent to the source pixels (column 4-6), mapping multiple pixels in the alpha channel (there are one-to-one correspondence in the pixels; column 4-5), embossing the pixels in the alpha channel (e.g., modified alpha channel pixel values; column 5, lines 35-51) and using a result of the embossing for changing brightness of the selected colors being applied (column 4-5), and providing highlights to the selected colors (brush effect), thereby providing a sense of depth (multiple layers of brush strokes) due to the embossing, giving the highlights to the applied colors (column 4-6).

Examiner Note:

- Long teaches changing the color value which meets the claim limitation of "embossing" because Long teaches tuning of the brightness by increasing or decreasing the intensity of the three color components of the individual pixels, wherein the degree of brightening or darkening (embossing) is prescribed by the control parameters such as brush profile values.
- Long teaches multiple layers of brush strokes which meets the claim limitation of "providing a sense of depth due to the embossing" because painting on the existing image with multiple brush strokes such as the action of smearing creates the layering effect that in turn creates a sense of depth and changing the color values by changing the stroke effects and the pixel profile data clearly meets the claim limitation of "changing brightness of the selected colors being applied."

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long U.S. Pat. No. 5,412,767 (Long).

10. Claim 1:

(1) Long teaches an apparatus for creating an emblazoning effect in a graphical image, comprising:

(a) A processor (e.g., the brush processor; column 5-6);

(b) A primary buffer for storing primary pixel values representing a region (e.g., primary store 19; column 5-6);

(c) A secondary buffer for storing secondary pixel values representing a region (e.g., second store 20; column 5-6);

(d) A user-modifiable alpha channel for storing tertiary values for pixels representing the same region (e.g., column 4, lines 58-67; column 5, lines 1-7; column 6, lines 35-45);

(e) A function (e.g., the shift brush function or smear brush function) representing application of both color and brightness values to input pixel values (e.g., column 4, lines 58-67; column 5, lines 1-7; column 6, lines 35-45), wherein said processor executes said function on the secondary pixel values (a source patch or a destination patch) to an extent represented by the tertiary pixel values (pixel profile data) held in the alpha channel (e.g., column 4, lines 58-67; column 5, lines 1-7; column 6, lines 35-45), for storing the resultant pixel values as the primary pixel values (e.g., modifying a patch in the primary store 19; column 5; or the modified pixel data is written to the destination patch 47; column 6), in the primary buffer (e.g., column 4-6);

(2) However, Long is silent on the claim limitation of "(f) User-activated means for copying the primary pixel values stored in the primary buffer to the secondary pixel values stored in the secondary buffer."

(3) Long teaches means are provided for copying image data from a first patch to a second patch of the image (column 4). It is conceivable that the source patch and destination patch are interchangeable and therefore Long suggests means for copying the primary pixel values in the primary buffer to the pixel values in the second buffer by copying the resulting

pixel values in the destination buffer to the source buffer when exchanging the role of the source patch and destination patch.

(4) It would have been obvious to one of ordinary skill in the art to have incorporated the means for copying the pixel data in the primary buffer back to the second buffer to replace the source region with the modified pixels wherein replicating is involved so as to reproduce the texture of the source region (column 1).

11. Claim 5:

The claim 5 encompasses the same scope of invention as that of the claim 1. The claim 5 is subject to the same rationale of rejection set forth in the claim 1.

Claim 6:

The claim 6 encompasses the same scope of invention as that of claim 5 except additional claimed limitation of choosing a media image, causing edges of the media image to have less transparency, adding the media image to a paint layer, and brightening parts of the paint layer with the media image. However, Long further discloses the claimed limitation of choosing a media image (column 4-6), causing edges of the media image to have less transparency (soft-edged brushes implying the gradient appearance in transparency; column 4-6), adding the media image to a paint layer (adding the source patch to the destination patch), and brightening (brightening or darkening depends on the selected brush profile and color, the process of brightening parts of the paint layer in inherent in Long; see column 4) parts of the paint layer

with the media image (e.g., the operating artist selects a brush color, a brush size and a type of brush; column 4).

Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 5 except additional claimed limitation of providing an image channel with a graphic image having source pixels, providing in the alpha channel alpha channel pixels which are spatially equivalent to the source pixels, assigning color values to the alpha channel pixels, and causing edges of an image formed by the alpha channel pixels to have less transparency. However, Long further discloses the claimed limitation of providing an image channel with a graphic image having source pixels (e.g., column 2, lines 33-55), providing in the alpha channel alpha channel pixels which are spatially equivalent to the source pixels (e.g., column 4, lines 40-43; column 5, lines 14-17), assigning color values to the alpha channel pixels (column 4, lines 58-67; column 5, lines 1-8), and causing edges of an image formed by the alpha channel pixels to have less transparency (e.g., soft edge brushes having a gradient effect in the level of transparency in the edges; column 4-6).

Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 5 except additional claimed limitation of providing source image channel having source pixels, providing a color level with selected colors, and providing in the alpha channel alpha pixels which are spatially equivalent to the source pixels. However, Long further discloses the claimed limitation of providing source image channel having source pixels (column 5), providing a color level with

selected colors (column 4), and providing in the alpha channel alpha pixels which are spatially equivalent to the source pixels (e.g., column 4, lines 58-67; column 5, lines 1-8).

Remarks

12. Applicant's arguments, filed 5/11/2004, paper number 6, have been fully considered but they are not deemed to be persuasive.

13. Applicant argues in essence with respect to Claim 1 and similar claims that:

(A) "The claims particularly point out new and unobvious features of the invention that have not been found in the references. As an example, a secondary buffer storing secondary pixel values in claim 1 is not mentioned in Long."

In response to the arguments in (A), Long teaches the secondary store 20, which is a secondary buffer storing secondary pixel values. Therefore, Long meets the claim limitation of a second buffer storing secondary pixel values. For example, Long teaches, in figures 1-3, column 3, lines 5-30, and column 5, lines 50-65, the claim limitation of the second buffer for storing values representing the pixels of an image region or an image patch.

14. Applicant argues in essence with respect to Claim 1 and similar claims that:

(B) "An alpha channel that stores tertiary values for the pixels is not found in Long."

In response to the arguments in (B), the claim limitation of "alpha channel" is interpreted as a channel for storing the alpha values or the tertiary values for the pixels. The Examiner asserts that Long teaches an alpha channel that stores tertiary values for the pixels. For example, Long teaches using a stencil signal to control the blending of the two images by the control value k from the stencil plane, wherein the control value k is used to control the blending of the two images (See column 5, lines 20-30; column 6, lines 30-50). The control value used in the alpha blending corresponds to the alpha value for the control of transparency in the blending between the pixels of the source and destination images. According to Long, the control value is calculated based on the brush shape profile of Fig. 2, which controls how the transparency changes with the pixel positions from the center of the image region or the image patch. This causes an image region or an image patch to have less transparency along the edges.

Moreover, Long teaches that the coefficient k is determined by multiplying together the brush shape profile 36, stylus pressure from the stylus/touch tablet combination 15 and the control image data held in stencil store 41. Accordingly, the brush shape profile 36, stylus pressure from the stylus/touch tablet combination 15 and stencil store 41 constitutes the alpha channel because those hardware can be constructed as an integral block for supplying alpha values for the blending of the source and destination images and the integral block constitutes an alpha channel that generate alpha values for the blending of the source and destination images.

15. Applicant argues in essence with respect to Claim 1 and similar claims that:

(C) "Long is silent about executing the function on the secondary pixel values to the extent of the tertiary values and storing the resultant pixel values as the primary pixel values in the primary buffer and then copying the primary pixel values in the primary buffer to the secondary pixel values stored in the secondary buffer."

In response to the arguments in (C), Long teaches that a part of any image in the secondary store 20 may be cut out and placed into the primary store 19, using a stencil signal to control the blending of the two images. Long teaches the coefficient k used in the blending of the two images is determined by multiplying together the brush shape profile 36, stylus pressure from the stylus/touch tablet combination 15 and control image data held in stencil store 41. Accordingly, the brush shape profile 36, stylus pressure from the stylus/touch tablet combination 15 and stencil store 41 storing the tertiary values constitutes an alpha channel.

Moreover, Long teaches in column 6, the source and destination patches 46, 47 defining pixel data in these patches and storing the modified pixel data in the destination patch 47. Long applies the smear function using the alpha values to generate the destination pixels in the destination patch. Long therefore teaches executing the smear function on the secondary pixel values (pixel values stored in the source buffer) to the extent of the tertiary values (to the extent of the alpha values used in the alpha blending) and storing the resultant pixel values (storing the modified pixel values) as the primary pixel values (as the destination pixel values) in the primary buffer (in the destination buffer). In another example, Long teaches storing the resultant pixel values in the primary store 19 as the primary pixel values for display.

Long also teaches supplying a copy of the pixel values to the secondary store 20. For example, in column 5 of Long, it is stated, "The two full resolution stores 19 and 20 may be used for the shift brush operation by supplying a copy of the same data to both stores, parallel reading of the source and destination patches is then simplified by reading the source patch from the secondary store 20 while modifying a patch in the primary store 19." Long teaches supplying a copy of the same data to both stores, i.e., a copying the same data to both the primary store 19 and the secondary store 20. Long therefore teaches or suggests supplying a copy of the pixel values in the primary store 19 to the secondary store 20.

16. Applicant argues in essence with respect to Claim 2 and similar claims that:

(D) "Claim 2 distinguishes from Long by teaching choosing a media image, causing an edge of the media image to have less transparency, and adding the media image to a paint layer and brightening parts of the paint layer with the media image...Claim 2 is not anticipated by Long."

In response to the arguments in (D), applicant argues that, "Claim 2 is not anticipated by Long." However, the Claim 2 is rejected under a different prior art, i.e., Decoste et al. U.S. Pat. No. 6,317,142 (Decoste). Therefore, Applicant's argument is irrelevant in view of the Rejection set forth in the last Office Action and this Office Action.

17. Applicant argues in essence with respect to Claim 3 and similar claims that:

(E) "Claim 3 differentiates from Long by describing, for example, assigning color value to the alpha channel pixels, brightening the color value and causing edges of an image formed by the alpha channel pixels to have less transparency. Those features are not found in Long or in the multiple places cited in columns 4-6 of Long."

In response to the arguments in (E), the Examiner interprets the alpha channel pixels as the modified pixels carrying the alpha information from the alpha channel or the alpha values associated with the destination pixels. From Long, the alpha values are calculated based on the pixel profile data and the pixel color values are modified after using the alpha values thus calculated. Long teaches the alpha blending using some control parameters wherein the control parameters correspond to the alpha values. The control parameters such as brush profile values control the blending of the two images and color values are assigned to the source and destination image pixels. Long therefore teaches changing the color values to the destination image pixels. Long further teaches soft brush edge (column 5, lines 1-10) in the blending of the two images wherein the soft brush edge is controlled by the shape of the brush profile (e.g., Figure 2). Long thus teaches causing edges of an image formed by the alpha channel pixels to have less transparency because a soft brush edge (column 5, lines 1-10) has an *adjustable gradient* and therefore edges have less transparency because a soft brush edge having an adjustable gradient gives the edge a soft or fuzzy appearance wherein a profile controls the gradient of the brush and opacity control determines the level of brush transparency.

Finally, Long teaches changing the color values of a portion of an image region or an image patch to brighten the image by increasing or decreasing the intensity of the three color components of the individual pixels, wherein the degree of brightening or darkening is prescribed by the control parameters such as brush profile values.

18. Applicant argues in essence with respect to Claim 4 and similar claims that:

(F) "Claim 4 further distinguishes from Long by pointing out mapping and embossing multiple pixels in the alpha channel and using a result of the embossing for changing brightness and providing highlights of the selected colors thereby providing a sense of depth due to the embossing. Long does not provide those features in the selected parts of columns 4-6."

In response to the arguments in (F), Long teaches changing the color value to "emboss" multiple pixels because embossing includes the tuning of the brightness by increasing or decreasing the intensity of the three color components of the individual pixels, wherein the degree of brightening or darkening (embossing) is prescribed by the control parameters such as brush profile values. Long further teaches the degree of brightening or darkening is prescribed by the control parameters such as brush profile values. It is noted that Long's brush profile values vary with the pixel positions from the center of an image region and multiple pixels associated with a portion of the image region are highlighted or embossed after alpha blending of the two image patches. Moreover, Long teaches mapping multiple pixels in the destination buffer and using the blended pixels with changed brightness. Long further teaches multiple layers of brush

strokes and therefore providing a sense of depth due to the embossing because painting on the existing image with multiple brush strokes such as the action of smearing creates the layering effect that in turn creates a sense of depth.

19. Applicant argues in essence with respect to Claim 5 and similar claims that:

(G) "Claim 5 differentiates from Long. As examples, creating an emblazoning effect storing tertiary pixel values in a user modifiable alpha channel and providing a function representing color and brightness and executing that function on the secondary pixel values to the extent represented by the tertiary pixel values, and storing resultant pixel values as the primary pixel values in the primary buffer, and then copying the primary pixel values from the primary buffer to the secondary pixel values stored in the second buffer in claim 5 are not mentioned in Long."

The arguments in (G) are similar to arguments in (B) and (C) and the Examiner's response to the arguments in (B) and (C) applies to the arguments in (G).

20. Applicant argues in essence with respect to Claim 6 and similar claims that:

(H) "Claim 6 differentiates from Long by teaching choosing a media image, causing an edge of the media image to have less transparency, and adding the media image to a paint layer and brightening parts of the paint layer with the media image. The cited parts of columns 4-6 for example, have none of those features. "

In response to the arguments in (H), Long teaches the brush profile data wherein the alpha values used for the blending of the two image regions vary with the pixel positions from the center of the image region or the image patch, causing an edge of the image region to have less transparency. Long teaches adding the source image patch to the destination image patch, i.e., Long teaches adding the source media image to a paint layer and brightening parts of the paint layer with the source media image using the alpha values calculated from the pixel profile data. The pixel profile data brightens everywhere in the image patch or just a portion of the image patch. For example, Long teaches the control parameters such as brush profile values to control the blending of the two images. Long also teaches assigning color values to the source and destination image pixels and changing the color values to the destination image pixels, wherein Long teaches changing the color values associated with the destination pixels using the alpha values wherein the alpha values change as a function of the distance from the center of the image region. According to Long, the center of the image region is brightened because the varying alpha values applied to the source and destination image pixels change the transparency associated with the destination image pixels. The image region or the image patch is brightened by increasing or decreasing the intensity of the three color components of the individual pixels in alpha blending, wherein the degree of **brightening** or darkening is prescribed by the control parameters such as brush profile values. Finally, Long teaches a soft brush edge (column 5, lines 1-10) that has an *adjustable gradient* from the center of the image patch to cause "edges to have less transparency" because a soft brush edge having an adjustable gradient gives the edge a soft or fuzzy appearance wherein a profile controls the gradient of the brush and opacity control determines the level of brush transparency.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 395-3900.

jcw
June 1, 2004

MICHAEL RAZAVI
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